The Governor's STEM Academy for Engineering, Marketing, and Information Technology Studies
at Landstown High School and Technology Academy

Rationale

Predicted needs by 2018:

- **14%** = the number of STEM-related jobs needed to be filled in Virginia

- **38%** = increase of Information Technology STEM-related jobs in Virginia

- **42%** = number of Marketing STEM-related jobs that will exist in Virginia

- **11%** = National increase in STEM Engineering work force

Current Employment and Wages in Virginia

Sales and related occupations

- 363,200 employed
- $36,750 average salary

Computer and mathematical occupations

- 181,260 employed
- $88,730 average salary

Architecture and Engineering occupations

- 79,060 employed
- $78,750 average salary

Mission

To provide students with STEM-enriched 21st-century technological skills and knowledge necessary to succeed in postsecondary education and the work force.

Objectives

- **Provide comprehensive guidance**
- **Deliver a sequential program of STEM-enriched courses**
- **Impart the knowledge and skills required to succeed in a STEM-related field**
- **Develop critical-thinking, problem-solving, and decision-making skills**
- **Offer opportunities to earn industry certifications**

Performance Measures

- **GPA**
- **SOL scores**
- **AP pass rate**
- **College credits received**
- **Number of industry certifications earned**
- **CTE completer data**
- **Dropout rate**
- **Percentage of students attending college**
- **Scholarships awarded**
- **Successful employment**
- **Exit Survey and Longitudinal Study**

MARKETING Cluster

Careers in:
- ► Account Executive
- ► Administrative Support Representative
- ► Agent
- ► Broker
- ► Business Development Manager
- ► Channel Sales Manager
- ► Client Relationship Manager
- ► Customer Service Representative
- ► Field Marketing Representative
- ► Field Representative
- ► Inbound Call Manager
- ► Industrial Sales Representative
- ► Key Account Manager
- ► Manufacturer's Representative
- ► National Account Manager
- ► Outside Sales Representative
- ► Regional Sales Manager
- ► Retail Sales Specialist
- ► Sales Engineer
- ► Sales Executive
- ► Sales/Marketing Associate
- ► Technical Sales Specialist
- ► Telemarketer
- ► Vice President of Sales

Governor's STEM Academy

Plan of Study

Professional Sales Pathway

Entrepreneurship

Internet Marketing

Marketing

Advanced Marketing

Certifications

NOCTI
NRF Customer Service
NRF Sales

Science, Technology, Engineering & Mathematics Cluster

Careers in:

► Aeronautical Engineer
► Aerospace Engineer
► Agricultural Engineer
► Application Engineer
► Architectural Engineer
► Automotive Engineer
► Biomedical Engineer
► Biotechnology Engineer
► Chemical Engineer
► Civil Engineer
► Communications Engineer
► Computer Engineer
► Construction Engineer
► Electrical Engineer
► Geothermal Engineer
► Industrial Engineer
► Manufacturing Engineer
► Marine Engineer
► Mechanical Engineer
► Mining Engineer
► Nuclear Engineer
► Petroleum Engineer
► Product/Process Engineer
► Systems Engineer
► Transportation Engineer

Plan of Study	Governor's STEM Academy Engineering and Technology Pathway
	Technical Drawing and Design Materials Technology *Introduction to Engineering Engineering Design & Development *Prerequisite for Engineering Design & Development
Certifications	NOCTI Certifications AutoCAD

Information Technology Cluster

Careers in:
- Animator
- Digital Media Designer
- Graphic Designer
- Instructional Technologist
- Media Specialist
- Multimedia Author
- Multimedia Developer
- Multimedia Specialist
- Producer
- Production Assistant
- Streaming Media Specialist
- Virtual Reality Specialist
- Web Administrator
- Web Architect/Designer
- Web Designer
- Web Developer
- Web Producer
- Webmaster

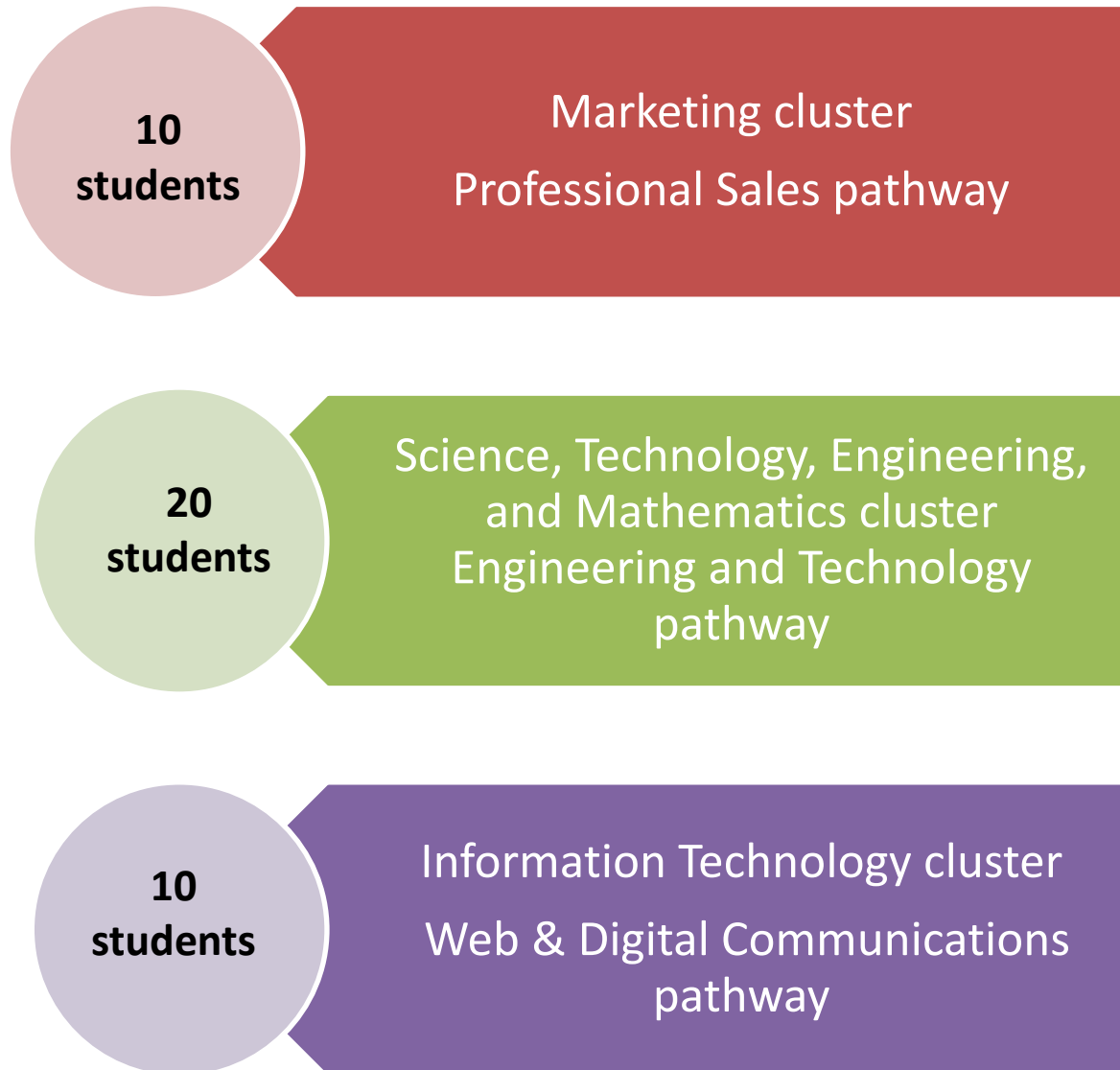| Plan of Study	Governor's STEM Academy Web and Digital Communications Pathway
Certification	Information Technology Fundamentals – IC³ Certification Design, Multimedia and Web Technologies
Certification	Database Management and Administration (Oracle, SQL) – Introduction to SQL Certification
Certification	Database Management and Administration – (Oracle PL/SQL) – Introduction to PL/SQL Certification

Recruitment	Admission
• Division and School Open House	Completed application including:
• Middle school visits	• Parent recommendation
• Video and printed materials	• Teacher recommendations
• Web site	• Student résumé
• Freshman orientation	• Transcripts
• Career Fair	• Testing data
• College visits	• Student interest essay
• Guest speakers	• Electronic portfolio

Projected Enrollment for 2012-2013

10 students — Marketing cluster
Professional Sales pathway

20 students — Science, Technology, Engineering, and Mathematics cluster
Engineering and Technology pathway

10 students — Information Technology cluster
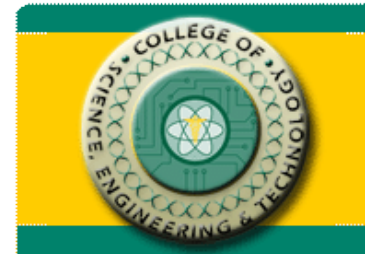Web & Digital Communications pathway
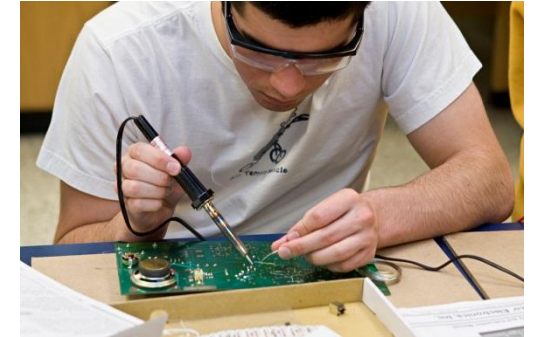
Program Highlights

- **Highly-qualified and certified CTE staff**
- **Large selection of CTE elective courses**
- **Multiple Advanced Placement and Honors level classes**
- **Dual Enrollment English courses**
- **STIHL summer camp**
- **Cooperative Education opportunities**
- **Internships/Mentorships**
- **Student organizations (Leadership Development and Competitive Events)**
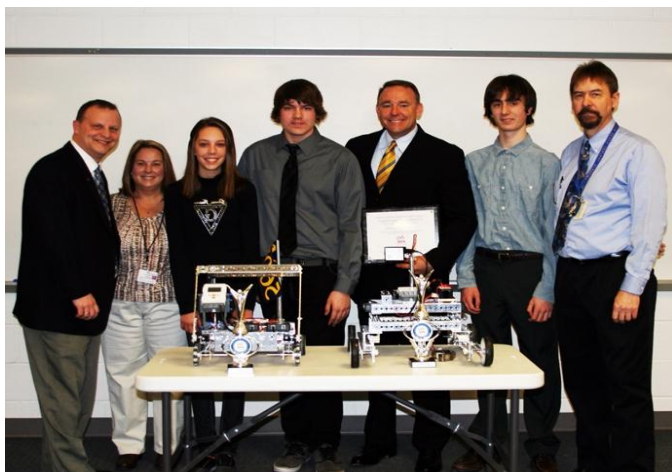
Partners

A Day in the Life

A Day in the Life

Thank you